



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8

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Ref: 8EPR-ER

OCT \*\*\*6 2005

### **ACTION MEMORANDUM**

SUBJECT:

Request for a Non-Time-Critical Removal Action at the American Fork Canyon/Uintah

National Forest - Pacific Mine Site, Utah County, Utah.

FROM:

Peter Stevenson, On-Scene Coordinates

**Emergency Response Team** 

THRU:

Johanna Miller, Supervisok

Emergency Response Unit,

Doug Skie, Director

Preparedness, Assessment & Emergency Response Program

TO:

Max H. Dodson, Assistant Regional Manager Office of Ecosystems Protection & Remediation

Site ID#: 08CW

Category of Removal: Non-Time-Critical, Third Party Lead

#### I. PURPOSE

The purpose of this ACTION MEMORANDUM is to request and document approval of the proposed Removal Action described herein for the American Fork Canyon/Uintah National Forest – on the private-property portion of the Pacific Mine site (Site) located in Utah County, Utah.

This Removal Action will address the need to mitigate the threats to the environment, tourists/recreational visitors, and animals/wildlife on a portion of the Site. The threat is posed by high concentrations of metals (especially lead, zinc, arsenic, and mercury) in the waste rock, tailings pile, and mine drainage from the former Pacific Mine. The levels of contamination and the unsecured nature of the situation dictate a Non-Time Critical Removal Action. Conditions existing at the Site present an imminent and substantial endangerment to human health and the environment and meet the criteria for initiating a Time Critical Removal Action under 40 CFR, §300.415 (b)(2) of the National Contingency Plan (NCP).

#### II. SITE CONDITIONS AND BACKGROUND

#### A. <u>Site Description</u>

The CERCLIS# for the entire American Fork Canyon/Uintah National Forest site is UTD988074951. The Region VIII Environmental Protection Agency (EPA) has not conducted a Removal Action at the American Fork/Uintah National Forest site; however, the United States Forest Service (USFS) completed a removal on a portion of the Site at the Dutchman Flat area and at the Pacific Mine in 2002/2003. The proposed Removal at the Pacific Mine (private land portion) would be the third Removal Action and will be conducted by Trout Unlimited.

The Site is a part of the American Fork Canyon Watershed Reclamation Project (See Exhibit 1 - attached) and is eligible for listing in the National Register of Historic Places (Heritage Resource Inventory of American Fork Area Mine Closures, 11/8/94). Various areas along the American Fork River are being considered for removal action, but the purpose of this Action Memorandum is to address the removal and disposal at property owned by Snowbird Corporation in Pacific Mine area which is approximately 3 acres. The Site contains contamination from mine waste dumps and adits generated by historic mining activity on the claim.

#### 1. Removal site evaluation

Through funding under the Clean Water Act, the USDA Forest Service (USFS) completed water quality sampling, macro-invertebrate inventories, soils analyses, sediment sampling, and fish tissue sampling in the American Fork Mining District in 1988, and studies were conducted as follows: 1) 1992 under a contract to Lidstone and Anderson; 2) 1998 & 1999 sampling by USFS; 3) 1999 by USGS Tracer study in the North Fork of American Fork River; and 4) 2000 by USGS Tracer Study in Mary Ellen Gulch.

In 2000 the Bureau of Reclamation (BOR) was contracted to conduct an XRF soil sampling to delineate the extent of heavy metal contamination at the Dutchman mine, the Sultana smelter, the Pacific and Dutchman smelter, and various other mine sites in the American Fork Canyon (See Exhibit 2 - attached). A site which exhibited and released large concentrations of hazardous materials from the American Fork Mining District was the Pacific Mine area. Its tailings deposit impinges on the North Fork of the American Fork River (in places forming the banks of the stream) and contains an abundance of heavy metals, including lead at an average concentration of 17,000 parts per million (ppm), cadmium 44 ppm, copper 335 ppm, zinc 6,000 ppm, arsenic 165 ppm, barium 1850 ppm, and iron 14,000 ppm in the surface soil.

Using the Resource Conservation and Recovery Act (RCRA) TCLP METALS Method 1311 for an inorganic analysis of these field samples, the BOR report (Exhibit 2) shows that arsenic, cadmium, and lead exceed the EPA regulatory standards (RS) at several of the sampling areas at Pacific Mine (OU2) - with lead testing as high as 220 mg/L (RS = 5 mg/L), arsenic as high as 56 mg/L (RS = 5 mg/L), and cadmium as high as 1.9 mg/L (RS = 1 mg/L). The BOR sampling report indicates that it may be necessary to remove 2 to 3 feet of material below the waste tailings to reach "clean" soils.

Macro-invertebrate inventories and fish tissue samples showed that: 1) macro-invertebrate populations in the river above the Site were reduced from approximately 14,000 individuals per square meter to less then 4,000 below the Site - the diversity index of species also fell from 12 to 8; and 2) fish below the Site had an <u>average</u> of 10 times as much (with a high of 20 times as much) lead as the fish above the Site. The lead-level in the fish was above the amount recommended for human consumption (the Food and

Drug Administration has established safe [action or guidance] levels for lead of 1.5 and 1.7 ppm in crustaceans and shellfish, respectively.

The Pacific Mine site has been the focus of several studies conducted by graduate students from the Universities of Wyoming and Utah State. One Master of Science candidate, Phyllis Bustamante, reported:

"The total Pb content at this site is considerably above the EPA threshold and exists in a form that is harmful to human health.....Lead at this site may pose a threat to human health if ingested by children.....If this area is to be visited by historians, signs should be posted informing people of the potential hazards of the tailings.....Measures should be taken to keep off-road vehicles off the tailings in order to reduce erosion potential."

In a January 18, 2000, a memorandum to the Forest Supervisor from Uinta National Forest's Hydrologist, recommendation was made to close the Pacific Mine to recreational use. His concerns centered on the high levels of contaminants at the site that could become air borne dust (occurring naturally or caused from ATV riding) that could be inhaled at concentrations hazardous to human health. In July of 1985, Ben Albrechtsen, R-4 Recreation Specialist, recommended closure of the site to off-road vehicles and initiation of testing to determine the contamination level at the site.

## 2. Physical location

The Site is located east of Forest City within Sections 22, T3S, R3E, SLB&M, adjacent to the North Fork of the American Fork River in the American Fork Canyon, Utah County, Utah (See Location Map in Exhibit 1 - attached).

#### Site characteristics

The American Fork Canyon Watershed's topography is typically high (Site's elevation = 7,800 feet) with rugged alpine peaks and lakes in cirque basins, steep to moderately steep timbered slopes, narrow canyon bottoms, and brush/grass covered slopes and ridges. The vegetation types in the area are aspen, spruce/fir, dry and wet meadow vegetation, sub-alpine and alpine herb lands. The annual precipitation is 50 inches, mostly in the form of snow. The area is highly mineralized and has many historic mines and mills.

The geology of the American Fork area is composed of layers of rock (cambrean through permian) with an total thickness of about 12,000 feet. A series of limestones, quartzites, shales, and dolomite units are exposed throughout the geologic time scale, intruded by igneous rocks, creating metamorphic effects. The upper American Fork area is crossed by numerous faults, including Silver Fork Fault near Mineral Flat, Pittsburg Fault near Pittsburg Mine, Fork Canyon Fault, several faults in the Miller Hill area, the Pacific Fault, and the Dutchman Fault. This area is drained almost wholly by three streams of generally westerly course: Little Cottonwood Creek, Big Cottonwood Creek, and the American Fork. The American Fork's main tributary is the stream in Mary Ellen Gulch (See locations of above areas in Exhibit 1).

## 4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

As evidenced by the sampling analyses and Site evaluation which have been completed thus far, there are several concerns at the Site. These have already been briefly discussed in relation to the evaluation of the Site (see Section IIA1). The release of hazardous substances, pollutants, or contaminants into the environment is largely the result of the on-site materials. These consist of ores and tailings, adits that have been closed with native soils/rock, concrete pillars or foundations, and timber cribs, all of which are easily accessible to heavy recreational use. Metals (especially arsenic, lead, zinc, and mercury) have been found in the soil and surface water sediments and there is evidence that the American Fork River and associated wetlands/creeks which flow downstream to Utah Lake are being contaminated with trace metals. Additionally the potential for airborne migration off-site is of concern.

On March 21, 2001, the Risk Assessment and Toxicology Program Manager from Tetra Tech EM, Inc. completed a Draft Memorandum (Exhibit 2 - Attached), Imminent and Substantial Endangerment to Human Health and Environment Due to Metals Contamination at Dutchman Flats and Pacific Mine Sites, American Fork Canyon. In summary, the memorandum stated that, after reviewing the analytical data, metalcontaminated soil and mine waste (tailings) present imminent health risks to the public and the environment at the Pacific Mine Site. In particular, inhalation, dermal, and ingestion exposure of recreationalists accessing the area are expected to result in unsafe exposure to lead and arsenic. Additionally, levels of lead, arsenic, and zinc from the mine runoff are adversely impacting the fish and fauna downstream from the Site. If there is delayed or no action on the privately owned lands that are the subject of this Action Memorandum, contamination will continue at surface water, river, drainage and previously cleaned areas on USFS land. This will increase the public health risks and threats to the environment for children or adults who visit the Site and/or use the area for recreation/fishing. If heavy metals continue to enter the river and wetlands in this fashion, the range of contamination and the potential adverse impacts to benthic and terrestrial organisms, plants, fish, and the environment will also increase.

## 5. NPL status

This Site is not an NPL site nor has it been proposed to be on the list.

## B. Other Actions to Date

#### 1. Previous actions

After listing of the Pacific Mine on EPA's CERCLIS in 1992, the Uinta National Forest completed a Preliminary Analysis of Pacific Mine and other sites in the American Fork Mining District. Releases of hazardous substances and contamination of National Forest resources were confirmed through the analysis that was completed in June 1994.

Since 1997 the USFS has conducted numerous studies at the American Fork Canyon Watershed. These studies have largely been funded by the Clean Water Action Plan of the abandoned mine restoration program. The studies included water quality, soils, stream sediment, macro-invertebrate, and fish. Most of the studies were concentrated in the heavily mined district (including the Pacific Mine area), with the inclusion of baseline

data for the areas above the mining regions. All tests indicated and confirmed releases from the Pacific Mine.

In October of 1999 the USFS assigned an OSC to the American Canyon Watershed Reclamation Project and on January 24, 2000, a meeting was held between the Forest Service, Utah Division of Water Quality, and the Utah Division of oil, Gas, and Mining. It was recognized by all the participants that the data that had been collected for the Pacific Mine indicated closure of the area to recreational users should occur as quickly as procedures would allow. Subsequently, a Community Relation Plan was developed, letters were sent to elected official alerting them of the contamination in American Fork Canyon, meetings were held with the Utah Council of Governments, and the public was banned from approximately three acres of mine tunnel and tailings at the Pacific Mine.

On June 21, 2000, USFS hosted a meeting and invited the EPA, the Utah Department of Environmental Quality (UDEQ), the Utah Department of Water Resources (UDWR), and U.S. Fish and Wildlife. Results of the various environmental studies and land ownership were presented to the agencies. The groups visited many of the sites in the North Fork Canyon Watershed and all agreed that several sites posed unacceptable risk to the environment and recreationalists in the canyon. The group also discussed potential repositories for waste materials from the sites and appropriateness of additional studies to include surveying and drilling in order to develop a removal plan. Therefore an Interagency Agreement (IAG) was entered into with the Bureau of Reclamation (BOR) in September of 2000 to do surveying and sampling for a complete characterization of the Dutchman Site, the Pacific Site, and a Common Repository. BOR completed those field operations in October of 2000 and provided data needed to prepare contract plans and specifications for removal actions.

In 2002 and 2003, the USFS conducted a Removal Action on its portion of the Pacific Mine Site. All contaminated waste rock, tailings, and soil were removed; and the remaining topsoil was shaped into a series of wetland depressions. The private land immediately above this area is the subject of this Action Memorandum. Without removal actions at the Site defined in this document, and other similar areas, heavy metals will continue to enter the river and wetlands, and the range of contamination and the potential adverse impacts to benthic and terrestrial organisms, plants, fish, and the environment will increase. Public health risks and threats to the environment to children or adults who visit the Site and/or use the area for recreation/fishing contamination will continue at surface water, river, drainage and previously cleaned areas.

#### 2. Current actions

There are no other actions being taken or proposed that are not discussed in this Action Memorandum.

## C. Federal, State, and Local Authorities' Roles

#### State and local actions to date

As outlined above, State and local agencies have discussed the concerns about the Site and will continue to be involved in the investigation/assessment/Removal at the Site.

#### 2. Federal Role

EPA will monitor the PRP Removal Action as defined in the enforcement attachment.

## III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at the Site present an imminent and substantial endangerment to human health and the environment, and meet the criteria for initiating a Removal Action under 40 CFR Section 300.415 (b)(2) of the NCP. The following factors from § 300.415 (b)(2) of the NCP form the basis for EPA's determination of the threat present and the appropriate action to be taken:

- (i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;
- (ii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;
- (iii) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;
- (iv) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;
- (v) The availability of other appropriate federal or state response mechanisms to respond to the release.

#### A. Threats to Public Health or Welfare

There is a potential for 1) direct access and trespassing on the areas of the Site where hazardous substances exist, 2) airborne migration of hazardous substances from the Site, 3) migration of contamination/hazardous substances from the Site into the regional groundwater, and 4) migration of contaminants and/or hazardous substances off-site to ponds, wetlands, previously reclaimed areas, and other surface water.

Over 1.2 million visitors pass through American Fork Canyon's fee collection station each year. The North Fork area is a notable tourist attraction with its historic mining landscape amidst the scenic beauty of the canyon. The large skiing recreational use is being continuously developed in the area, and in 1999 ski lifts were constructed in the headwaters of American Fork Canyon by Snowbird Lt., accessed from their resort in Little Cottonwood Canyon on the Wasatch-Cache National Forest.

The popularity of the North Fork of the American Canyon is in part due to the fact that it comprises a block of public and private lands totaling 14,500 acres classified as "roaded" - with roads and trails open to ATV use. It is surrounded by much larger areas of "designated wilderness" and "inventoried unroaded lands". Many people come to the North fork to recreate because it is less restricted than any other NFS land in as close a proximity to Utah's population center. This Removal Action's Site lies along the North Fork within this popular motorized recreation route which leads to the Site's tailings piles. There are individuals who frequent the tailings pile sites almost daily during the summer months.

The Site falls within the Land and Resource Management Plan of Uinta National Forest, and the

Plan states that population increases nearby will place more demand on the area. It states that additional recreation use in the area will include motorized sight seeing, ATV and Jeep riding, fishing, exploring mine sites, picnicking, hiking, camping, hunting, and equestrian riding.

The January 26, 2001, Draft Memorandum (Exhibit 2 - Attached), Imminent and Substantial Endangerment to Human Health and Environment Due to Metals Contamination at Dutchman Flats and Pacific Mine Sites, American Fork Canyon, states that "after reviewing the analytical data, metal-contaminated soil and mine waste (tailings) present imminent health risks to the public and the environment at the Dutchman Flats' Site. Health and environmental risks at the Site include impacts on human health through recreational use of the mine site areas and resulting inhalation, dermal and ingestion exposure to metals-contaminated tailings material. In addition, a potential for human exposure to high levels of metals exists through the consumption of locally caught fish. Environmental impacts include the potential effects of stream contamination on populations of Bonneville cutthroat trout, a State of Utah conservation species, and documented reductions of macro-invertebrates downstream from the Site."

#### B. Threats to the Environment

Wildlife in the adjacent habitats and the fish in the confluent waters are exposed to metals contamination either through direct contact with the effluents/ standing water/ sediments or indirectly through consumption of organisms (algae, aquatic insects, or animals) feeding in the area. As detailed in the "evaluation section" (IIA1) of this Action Memorandum, these pathways have been extensively studied by USFS/USGS under a Clean Water Action Plan. Macro-invertebrate inventories and fish tissue samples showed that macro-invertebrate populations in the river above the Site were approximately 14,000 individuals per square meter but below the Site they were only 4,000 individuals per square inch, and fish below the Site had an average of 10 times as much (with a high of 20 times as much) lead as the fish above the Site. The lead-level in the fish was above the amount recommended for human consumption. The river is spawning and rearing streams for Bonneville cutthroat trout (a sensitive species), brown, and rainbow trout. Utah State classifies American Fork River as a Class 3-A Cold Water Fishery.

The area provides habitat for elk, mule deer, bighorn sheep, Rocky Mountain goat, black bear, bear, moose, mountain lion, marmot, and abundant beaver. The habitat is also suitable for the spotted frog.

A threat to the environment also exists through the migration of and airborne exposure to the contaminated particles and dust. On dry windy days, the dust and particles may migrate to the surface waters, wetlands, and other recreational areas as they become airborne.

#### Arsenic

Arsenic may bio-accumulate in aquatic organisms, primarily in algae and lower invertebrates. The embryonic and larval stages of aquatic animals are generally the most sensitive and sediment-feeding organisms will contain higher metal concentration than other organisms.

#### **Lead**

Bioaccumulation of lead is known to occur, and lead is found in the tissue of many wild animals, including birds, mammals, fishes, and invertebrates. The most publicized effects of lead have been on the impact of ingestion of lead by waterfowl. Acute and chronic lead toxicity have been demonstrated as a definite threat to bird populations. There is also evidence that lead at high concentrations can eliminate populations of bacteria and fungi on leaf surfaces and in soil. Many of the microorganisms play key roles in the decomposer food chain.

#### Zinc

Zinc produces acute toxicity in freshwater organisms over a range of concentrations from 90 to 58,100 ug/liter, and appears to be less toxic in harder water. Acute toxicity is similar for freshwater fish and invertebrates. A final acute-chronic ratio for freshwater species of 3.0 has been reported. Some researchers have speculated that exposure to excessive amounts of zinc may constitute a hazard to animals. Laboratory studies and findings in animals living near lead-zinc smelters suggest that excessive exposure to zinc may produce bone changes, joint afflictions, and lameness.

Also see analysis and further data in the January 26, 2001, Draft Memorandum (Exhibit 2 - Attached), <u>Imminent and Substantial Endangerment to Human Health and Environment Due to Metals Contamination at Dutchman Flats and Pacific Mine Sites, American Fork Canyon.</u>

#### IV. ENDANGERMENT DÉTERMINATION

Actual or threatened releases of hazardous substances, pollutants and contaminants from this Site, if not addressed by implementing the response action described in this ACTION MEMORANDUM, present potential imminent and substantial endangerment to public health, or welfare and the environment.

## V. PROPOSED ACTIONS AND ESTIMATED COSTS

#### A. <u>Proposed Actions</u>

#### 1. Proposed action description

Removal Actions will be implemented at the Site to remove and dispose of contaminated soils, while maintaining the integrity of the historic Pacific Mine concrete foundations, with said soils to be shaped or transported to and disposed of in an area on-site.

Specifically, waste rock, contaminated soil, and tailings with arsenic concentrations greater than 400 mg/Kg and/or lead concentrations of 2000 mg/Kg will be excavated or shaped on-site.

Trout Unlimited is producing a design and work plan for the consolidation and capping of the tailings/waste rock on private property. The tailings will be covered with topsoil and rocks as necessary, to discourage trespass by ATV and other off-road vehicles. The repository will be shaped to encourage the run-off from the repository into drainage channels which surround the repository; hence, "run-on" will be eliminated and "run-off" will be directed off the pile. When completed, the stockpile will be seeded with a seed-mix approved by USFS.

## 2. Contribution to remedial performance

The Removal Action described herein will remediate the site; and, therefore, no Remedial Action, including preparation of an HRS Scoring Package will be necessary.

#### 3. Description of alternative technologies

N/A

#### 4. EE/CA

An EECA has been prepared by *Trout Unlimited* and is available in the Administrative Records.

## 5. Applicable or relevant and appropriate requirements (ARARs)

This Removal Action will attain to the extent practicable, considering the exigencies of the situation, applicable or relevant and appropriate requirements of federal environmental or more stringent state environmental laws. A thorough discussion of the applicability and/or relevance of ARARs is contained in the EE/CA prepared by Trout Unlimited, and will not be repeated here. In general, the ARARs will consist of USDWR adopted stream water quality standards and a list of ARAR's provided to the USFS/EPA by UDEQ, a summary of which is provided below:

#### **FEDERAL**

- National Historic Preservation Act (16 USC Section 470; 40 CFR Section 6.301 (b); and 36 CFR Part 800).
- b. Endangered Species Act of 1973 (16 USC Section 1531; 40 CFR Subpart C, Section 6.302 (h); and 50 CFR Part 402).
- c. Clean Water Act (33 USC Sections 1341 and 1344).
- d. Clean Water Act (40 CFR Part 230).
- e. Executive Order 11988 (Floodplain Management, 1977),(40 CFR Subpart C, Sec. 6.302 (b)).
- f. Executive Order 11990 (Wetlands Protection), (40 CFR Subpart C, Sec 6.302 [a]).
- g. Fish and Wildlife Coordination Act (16 USC Section662); (40 CFR Subpart C, 6.302 [e]).
- h. Occupational Safety and Health Act of 1970 (29 USC Section 651) The Health & Safety Standards for Employees Engaged in Hazardous Waste Operations, (50 FR 45654).
- Resource Conservation and Recovery Act (RCRA), Subtitle C (capping and placement requirements are relevant and appropriate), and Subtitle D (solid waste disposal requirements are applicable).
- k DOT Hazardous Material Transportation Regulations (49 CFR Parts 107, 171-177).
- Toxic Substances Control Act ((40 CFR Parts 129, 750, and 761).

#### STATE

- a. Utah Safe Drinking Water Act (19-4-101 ET SEC UCA; R449, UAC).
- Utah Groundwater Protection Rules (R448-6 UAC).
- c. Utah Water Pollution Control Act (19-5-101 ET SEC UCA; R448-2 UAC, R448-8 UAC).
- d. Utah Air Conservation Act (19-2-101 ET SEC UCA; R446-1 UAC).
- e. Utah Occupational Safety and Health Act (35-9-1 UCA; R500 UAC, Subpart 126, Subpart 216, Subpart 102).
- f. Utah Wildlife Protection Act (23-15-6 UCA).
- g. Utah Channel Diversions (23-15-5 UCA).
- h. Utah Water Regulations (73-3-29 UCA).
- i. Utah Well Drilling Standards (R655-1 UAC)
- j. Utah Solid & Hazardous Waste Act (R315-1,2,&5 UAC)

#### 6. Project Schedule

If AOC requirements and a Work Plan can be timely met, it is anticipated that the proposed Removal Action will commence in late 2005.

## 8. Estimated Costs

All costs will be covered by Trout Unlimited. The total estimated cost is \$150,000.

#### VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Contamination will continue at surface water, river, drainage and previously cleaned areas on USFS land. Delayed or no action will increase public health risks and threats to the environment because the hazardous substances on-site pose a health risk to children or adults who visit the Site and/or use the area for recreation/fishing. If heavy metals continue to enter the river and wetlands in this fashion, the range of contamination and the potential adverse impacts to benthic and terrestrial organisms, plants, fish, and the environment will increase.

#### VII. ENFORCEMENT

A separate addendum will provide a confidential summary of current and potential future enforcement actions.

#### IX. RECOMMENDATION

This decision document represents the selected Removal Action for the, Pacific Mine area in the American Fork Canyon, Utah County, Utah, developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at the Site meet the NCP §300.415(b)(2) criteria for a Removal and I recommend your approval to document the Emergency Removal Action Emergency Removal Action. The total project budget is estimated to be \$150,000; however, no monies will come from the Regional removal allowance because Trout unlimited will be responsible for the removal costs.

Approve:	Max H. Dodson Assistant Regional Administrator Office of Ecosystems Protection and Remediation	Date:
Disapprove:_	Max H. Dodson Assistant Regional Administrator Office of Ecosystems Protection	Date:

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and Remediation

#### Attachments:

Exhibit 1

- Location Map

Exhibit 2

- Endangerment to Human Health and Environment Report from Tetra Tech EM, Inc. – 01/26/01

## SUPPLEMENTAL DOCUMENTS

Support/reference documents which may be helpful to the reader and/or have been cited in the report may be found in the Administrative Record File at the Superfund Records Center for Region VIII EPA, 999 18th Street, Denver, Colorado 80202.